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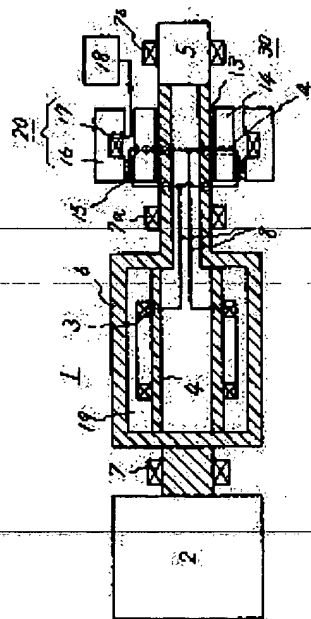
(21)Application number : 55-151872

(71)Applicant : HITACHI LTD

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(72)Inventor : MAKI NAOKI  
NUMATA SEIJI  
YAMAGUCHI KIYOSHI  
YAMAMOTO HIROE

## (54) EXCITER FOR SUPERCONDUCTIVE ROTARY MACHINE



### (57)Abstract:

PURPOSE: To smoothly excite a superconductive field coil of a superconductive rotary machine and to smoothly remove energy at its quenching time by providing a single-pole rotor on a shaft and a stationary exciter at the periphery thereof and providing switching means for exciting direction in positive or negative direction.

CONSTITUTION: A single-pole rotor 14 is mounted via an insulator 13 on the same shaft as the rotational shaft of a superconductive rotor 1, and a conductor 15 is mounted. The terminals of power leads 8 are connected to both axial ends of the conductor 15, and are led through holes (a) to the rotor 1. A stationary exciter 20 is provided at the periphery of the rotor 14, and is excited by a DC power source 18. When a superconductive field coil 3 is quenched, the exciting direction of the single-pole machine 30 is switched in its

exciting direction to positive or negative direction to convert the generating action to motor action. In this manner, the magnetic energy y of the coil 3 can be converted to rotary energy, thereby smoothly removing the excitation and energy.

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